

## **SUPPLEMENTAL EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Applicant's Attorney (Mr. Thomas E. Kocovsky with Reg. No 28,383), on April 14, 2009.
3. The application has been amended as follows:
4. **In Specification** page 4, line 17, after images delete "in accordance with claim 1".
5. **In Specification** page 5, line 8, after embodiment delete "of the present invention as set forth in claim 2"; line 21, after embodiment delete "of the present invention as set forth in claim 3".
6. **In Specification** page 6, line 1, after embodiment delete "of the present invention as set forth in claim 4"; line 8, after embodiment delete "of the present invention as set forth in claim 5"; line 19, after embodiment delete "of the present invention as set forth in claim 6"; line 24, after embodiment delete "of the present invention as set forth in claim 7".
7. **In Specification** page 7, line 3, after embodiment delete "of the present invention as set forth in claim 8"; line 15, after embodiment delete "of the present invention as set forth in claim 9"; line 20, after embodiment delete "of the present

invention as set forth in claim 10"; line 25, after embodiment delete "of the present invention as set forth in claim 11".

8. **In Specification** page 8, line 6, after embodiment delete "of the present invention as set forth in claim 12"; line 23, after embodiment delete "of the present invention as set forth in claim 13"; line 30, after computer. delete "The computer program, according to this exemplary embodiment of the present invention, performs the method according to the present invention as set forth in claim 1".

### **Drawings**

9. The drawings were received on December 9, 2005. The Examiner accepts these drawings.

### **Reasons for Allowance**

10. Applicant's amendment/argument (pages 8-13), filed on November 24, 2004, has been fully considered and are persuasive. As a result the art rejection of claim 3, 5-13 and 17 have been withdrawn. Therefore, claims 3, 5-13 and 17 are allowable.

11. The following is an examiner's statement of reasons for allowance. The prior art of record fails to teach or suggest three dimensional image segmentation comprises (a) automatically determining which images of the plurality of two-dimensional images have insufficient feature information for the structure of interest, manually drawing attractors in the form of at least a partial contour of the structure of interest in the two-dimensional images of the plurality of two-dimensional images with insufficient feature information and with a computer,

segmenting the structure of interest with a three-dimensional segmentation process using the attractors and the compiler segmented contours of the plurality of two-dimensional images in combination into other features and elements of claims 1 and 13; (b) an image processor for segmenting a three-dimensional structure of interest which is contained insufficient feature information for the structure of interest and acquiring attractors manually indicated by a user, wherein the attractors have the form of at least a partial contour of the structure of interest in the images of the plurality of two-dimensional images in combination into other features and elements of claim 7; (c) an image processor which separating the plurality of two-dimensional images into a first set of images that is automatically segmentable using the two-dimensional segmentation algorithm and a second set of two-dimensional images that are non-automatically segmentable using the two-dimensional segmentation algorithm due to insufficient boundary designation in a structure of interest in each image in the second set of images and with the three-dimensional segmentation algorithm, automatically segmenting the structure of interest in three-dimensions based on the boundaries designated in the first set of two-dimensional images and the modified second set of two-dimensional images in combination into other features and elements of claim 17.

**12. Claims 3, 5-23 and 17 (now renumbered 1-11) are allowed.**

**13.** Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Citation of Relevant Prior Art**

**14.** The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zahalka et al (U. S. 6,385,332 B1) disclose automated segmentation method for 3-dimensional ultrasound.

Hahn (U. S. 6,985,612 B2) discloses computer system and method for segmentation of digital image.

Sheehan et al (U. S. 5,435,310) disclose determining cardiac wall thickness and motion by imaging and three-dimensional modeling.

**Contact Information**

**15.** Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Werner, can be reached at (571) 272-7401. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.

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/Abolfazl Tabatabai/

Primary Examiner, Art Unit 2624

April 15, 2009